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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/603,836	06/25/2003	Lieven Wultepute	216397	2730

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EXAMINER	
HOGAN, JAMES SEAN	
ART UNIT	**PAPER NUMBER**
3752	

DATE MAILED: 06/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/603,836	WULTEPUTTE, LIEVEN	
	Examiner	Art Unit	
	James S. Hogan	3752	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 January 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *7-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *7-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *25 June 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *11/26/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Examiner's Statement

It is with regret that the previous Office Action's allowance of claims 7 and 8, dated August 19, 2004, has been withdrawn in view of new art by which the content of said claims has been compared in the paragraphs below.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 7 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps are: a step of comparison between a desired target pressure flow rate versus an actual measured pressure flow rate.

Claim Rejections - 35 USC § 102

> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 9 rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,950,441 to Mahableshwarker et al.

4. Regarding claim 9, Mahableshwarker et al. ('441) discloses a control system for monitoring characteristics of one or more spray nozzles (56) used in a flue cooling system having a liquid supply line (48) coupled with the one or more spray nozzles (56) including a flow meter (52) disposed to sense a flow rate of liquid supplied to the spray nozzles, a compressed air supply line (40) including an air regulation section (42) disposed to provide compressed air to the spray nozzles', and a spray controller (30)

coupled with the flow meter and the air regulation section, the controller being disposed to provide an output signal (see Fig. 2) to indicate a performance characteristic of the spray nozzles based on the measured liquid pressure and/or measured air pressure. An adjustable liquid flow valve (47) is located in the liquid spray supply line disposed to receive a control signal from the controller to adjust the amount of liquid supplied to the spray nozzles; and a temperature sensor (22) located in proximate relation to the flue gas and disposed to provide a temperature sensing signal to the controller, where the controller, in response to receipt of the temperature sensing signal, adjusts control signal supplied to the liquid flow valve (Fig 2).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 7-8 rejected under 35 U.S.C. 103(a) as being unpatentable over U.S Patent No. 5,950,441 to Mahableshwarker et al in view of U.S Patent No. 5,677,500 to Ackerley et al.

7. Regarding claims 7-8, the device of Mahableshwarker et al. ('441) teaches a method of monitoring the operating conditions of a multitude of spray nozzles used in the cooling of a flue. In the subroutines outlined in Fig. 5 and Fig 6 the steps 300-318 for liquid, and steps 400-412 for air, an outline of a process for monitoring the pressure

flow rate of a bank of nozzles, and comparing the measured actual liquid and air flow rates versus a desired rates is detailed. Mahableshwarker et al. ('441) does not teach the generation of an error message during its monitoring routines. Ackerley et al. ('500) teaches a pressure reduction system test where in Fig. 3A, a routing is charted where a deviation to a measured pressure generates an error message for "faulty valves" (Col. 2, line 32-42). It would have been obvious to one skilled in the art at the time the invention was made to modify the subroutine flowchart of Mahableshwarker et al. ('441) for the monitoring of air and water pressure to include the generation of an error message of Ackerley et al. ('500) so that a control operator can be made cognizant of a malfunction.

Claims 10-13 rejected under 35 U.S.C. 103(a) as being unpatentable over U.S Patent No. 5,950,441 to Mahableshwarker et al in view of U.S Patent No. 5,677,500 to Ackerley et al. and further in view of U.S. Patent No. 5,193,406 to Wolf et al.

8. The rejection of claim 9 above serves as the basis for the following. Mahableshwarker et al. ('441) does not teach the generation of a message indicative of a malfunction. Ackerley et al. ('500) teaches a pressure reduction system test where in Fig. 3A, a routing is charted where a deviation to a measured pressure generates an error message. Neither Mahableshwarker et al. ('441) or Ackerley et al. ('500) teach a process of pressure and volume rate comparison by which a determination of worn or plugged nozzles can be made. Wolf et al. ('406) teaches a process of pressure and volume rate comparison by which a determination of worn or plugged nozzles can be made (. It would have been obvious to one skilled in the art at the time the invention

was made to modify the subroutine flowchart of Mahableshwarker et al. ('441) for the monitoring of air and water pressure to include the generation of an error message of Ackerley et al. ('500) and the determination of a worn or plugged liquid or air nozzle technique of Wolf et al. ('406) so that a control operator can be made cognizant of a malfunction, and to be able to pinpoint the malfunction's origin.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure is as follows:

U.S. Patent No. 6,045,056 to Tardoni, disclosing an optimized spray device.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James S. Hogan whose telephone number is (571) 272-4902. The examiner can normally be reached on Mon-Fri, 7:00a-4:00p EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Scherbel can be reached on (571) 272-4919. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JSH
06/13/2005

David A. Scherbel
Supervisory Patent Examiner
Group 3700